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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,219

09/16/2003

L. Wynn Herron

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LAW OFFICE OF DELIO & PETERSON, LLC.
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EXAMINER

TALBOT, BRIAN K

ART UNIT

PAPER NUMBER

1762

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/605,219

Applicant(s)

HERRON ET AL.

Examiner

Brian K. Talbot

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 20-23 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/16/03</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's election of Group I, claims 1-19 and 24 in the reply filed on 1/26/07 is acknowledged. It is noted that Applicant traverses the restriction, however, because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. In light of the Election filed 1/26/07, non-elected claims 20-23 and 25 should be canceled in response to this Office Action. Claims 1-19 and 24 remain active in the application.
3. The replacement sheets for the drawings submitted on 4/3/06 have been accepted.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Due to the Restriction and Election noted above, no claim directed toward the apparatus or article remain active in the application. On method claims remain.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 1,2 and 4-14 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The “surface” being a separate film strip located between the roller and mask is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

6. Claims 1,2,15 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The phrase “without substantially sliding the roller and film surface over the mask” is not enabled by the description. The drawings and specification call for x-directional movement (28) so as to apply the paste in the vias. This would constitute “sliding the roller and surface over the mask”.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1 and 2, the term “surface” is confusing. Is the term “surface” referring to the “roller surface” or another surface?

Claim Rejections - 35 USC § 103

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 02-177496 in combination with IBM Technical Disclosure Bulletin, "Roll Extrusion filling of small vias".

JP 02-177496 teaches a screen printer process whereby a roller (20) applies cream solder (23) through holes (24) in a screen (11) and onto a printed circuit board (not shown) (abstract and Fig. 2).

JP 02-177496 fails to teach the use of a “surface” or film strip between the roller (20) and the mask (11).

IBM Technical Disclosure Bulletin, “Roll Extrusion filling of small vias” teaches vias in a green ceramic substrate being filled with paste by rubber rollers, a mask and a MYLAR film placed between the mask and the rubber rollers. The MYLAR film is utilized to prevent the paste from sticking to the rubber rollers. The paste is applied as a film over the entire surface of the green sheet.

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified JP 02-177496 process by incorporating a Mylar film between the roller (20) and the screen (11) to prevent sticking of the paste to the roller (20).

With respect to claims 4-7,9 and 6-18, the claims recite applying the paste in a bead, continuous, discontinuous, etc. it is the Examiner’s position that the application “type” would be dependent upon the desired end product and would be within the skill of one practicing in the art.

Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 02-177496 in combination with IBM Technical Disclosure Bulletin, “Roll Extrusion filling of small vias” further in combination with Casey et al. (2002/0009539).

Features described above are incorporated here.

JP 02-177496 in combination with IBM Technical Disclosure Bulletin, “Roll Extrusion filling of small vias” fails to teach the “surface” or MYLAR film being provided as a spool of rollers.

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Casey et al. (2002/0009539) teaches a similar apparatus whereby a roller (32) having a film (24) from a supply roll to a take-up roll located between paste filled vias (16) and a mask (14).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified JP 02-177496 in combination with IBM Technical Disclosure Bulletin, "Roll Extrusion filling of small vias" by including a supply and take-up roller for the MYLAR film as evidenced Casey et al. (2002/0009539) with the expectation of achieving similar success as well as the fact of avoiding the need to peel the MYLAR film after the process which would increase production by reducing process time.

While the Examiner acknowledges the fact that the film (24) is utilized for a different purpose (blotting to remove solvent), it is the Examiner's position that the "supply" of the film is what is relied upon and not the function of the film itself.

With respect to claim 10 which recites that the film is attached to the roller, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar success by incorporating the film on the roller as opposed to a separate sheet.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 8AM-4PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BK Talbot 4/10/07

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT